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Datasheet for #sbcw6269 UP

Recommendations:

Please read the User Manual and have a look at the FAQ at
`http://www.alpeslasers.ch/?a=142`

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.

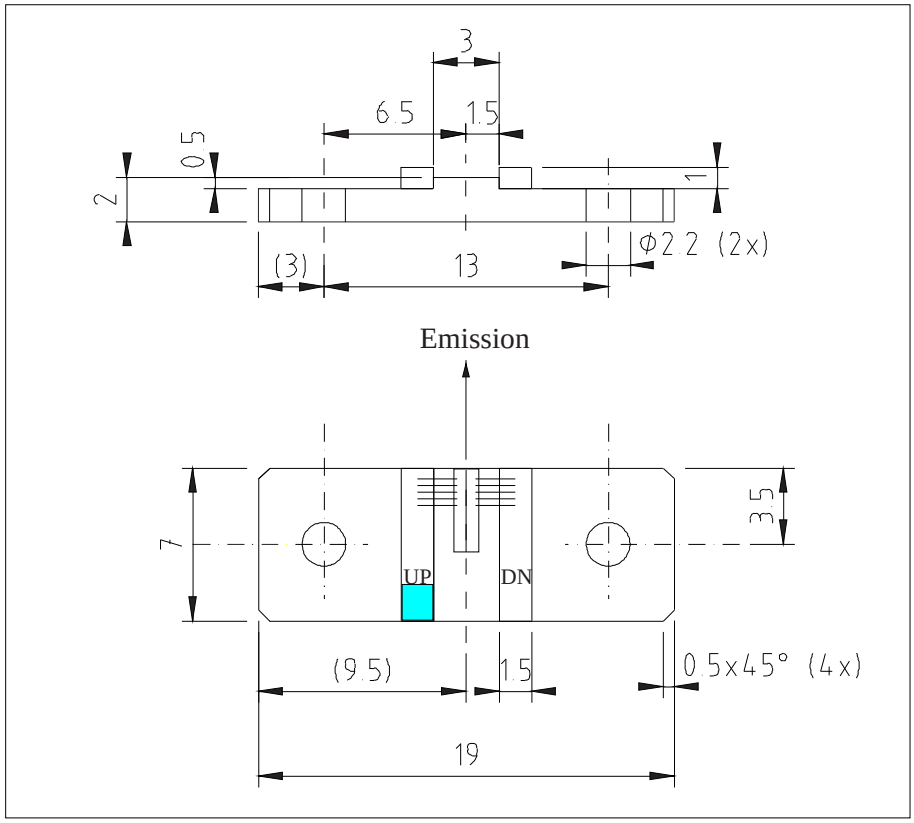

Figure 1: Support mounting for #sbcw6269 UP (please note that the laser is connected to the UP pad drawned in blue)

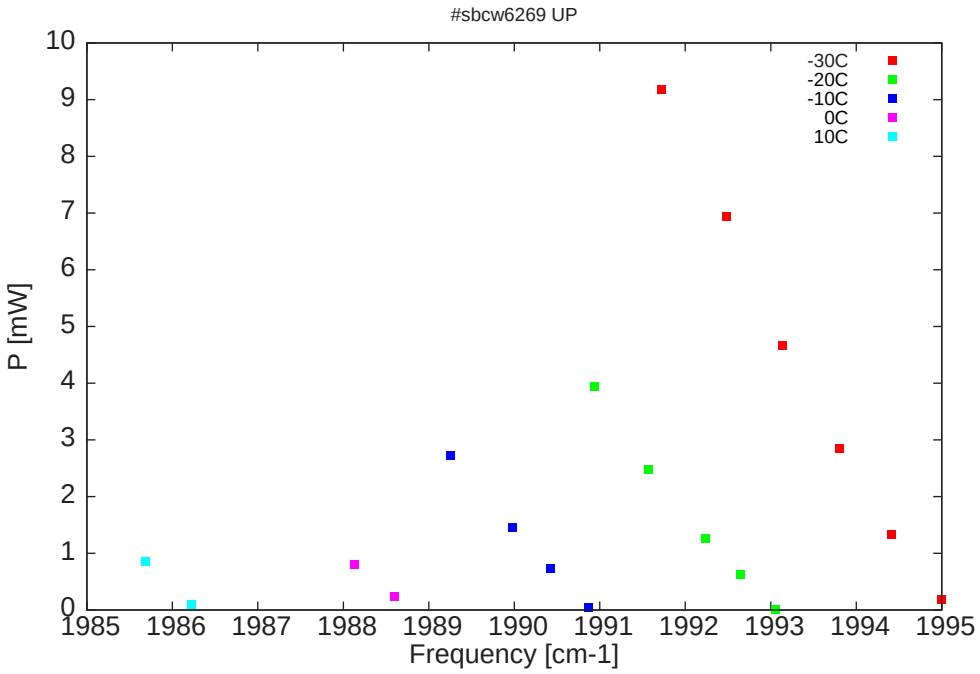

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

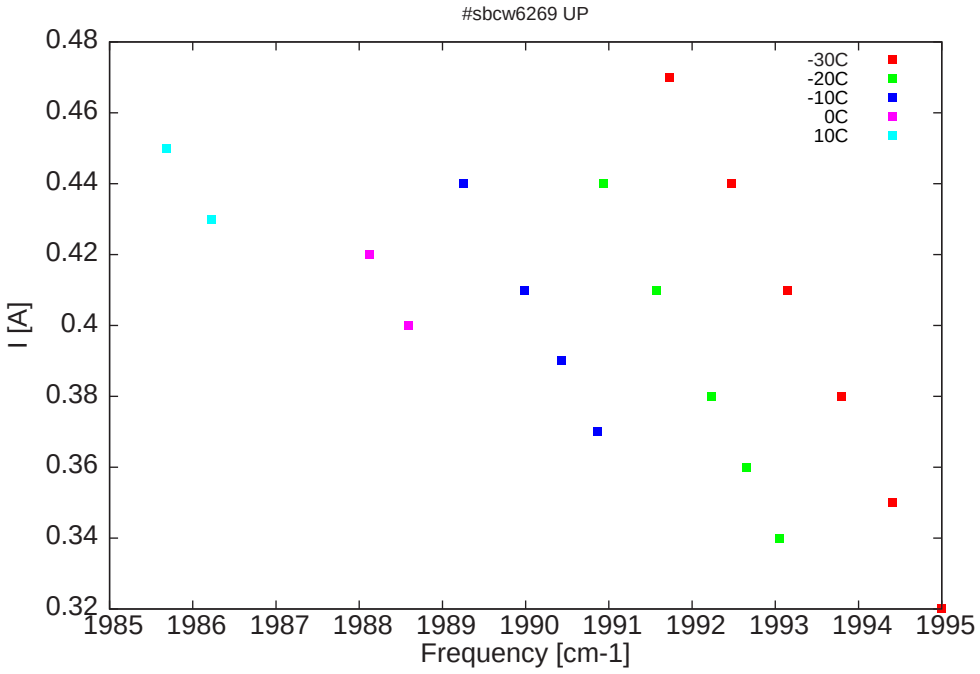

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5012.5	1995	0.2	-30	9.7	0.32
5014	1994.4	1.3	-30	9.9	0.35
5015.5	1993.8	2.8	-30	10.1	0.38
5017.2	1993.1	4.7	-30	10.3	0.41
5018.9	1992.5	6.9	-30	10.5	0.44
5020.8	1991.7	9.2	-30	10.7	0.47
5017.4	1993	0	-20	9.7	0.34
5018.4	1992.7	0.6	-20	9.8	0.36
5019.5	1992.2	1.3	-20	9.9	0.38
5021.2	1991.6	2.5	-20	10.1	0.41
5022.9	1990.9	0	-10	9.7	0.37
5024	1990.4	0.7	-10	9.8	0.39
5025.2	1990	1.5	-10	10	0.41
5027	1989.3	2.7	-10	10.2	0.44
5028.7	1988.6	0.2	0	9.8	0.4
5029.9	1988.1	0.8	0	9.9	0.42
5034.7	1986.2	0.1	10	9.9	0.43
5036	1985.7	0.9	10	10	0.45
5022.8	1990.9	3.9	-20	10.3	0.44

Table 1 : singlemode optical output power as function of operating parameters

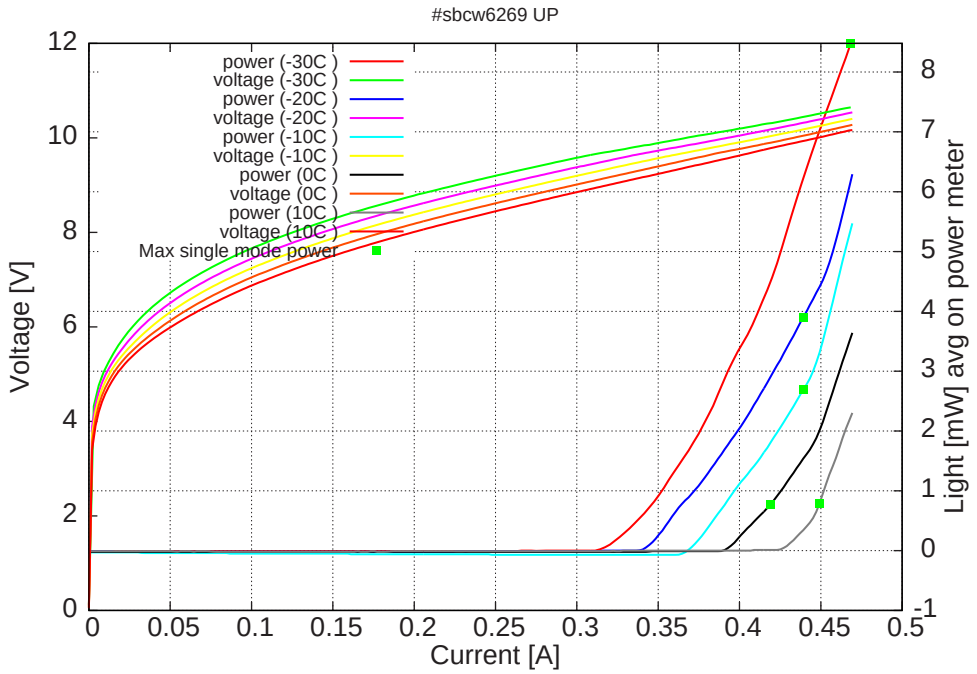

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

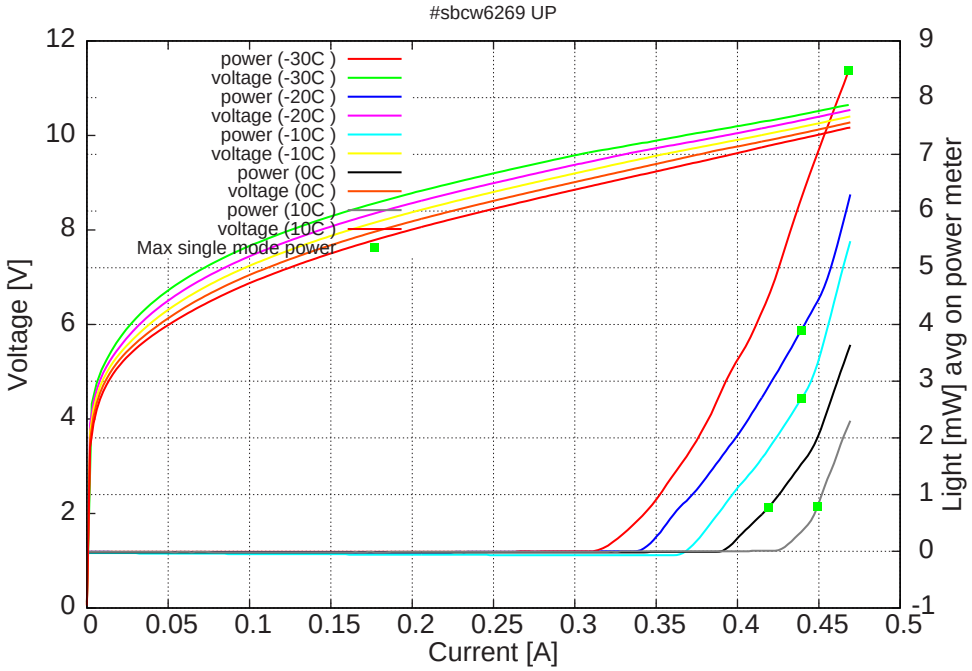

Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -25C: Ith=315mA / Vth= 9.7V (2-wires measurements). Maximum operation current: 0.47A for all temperatures.

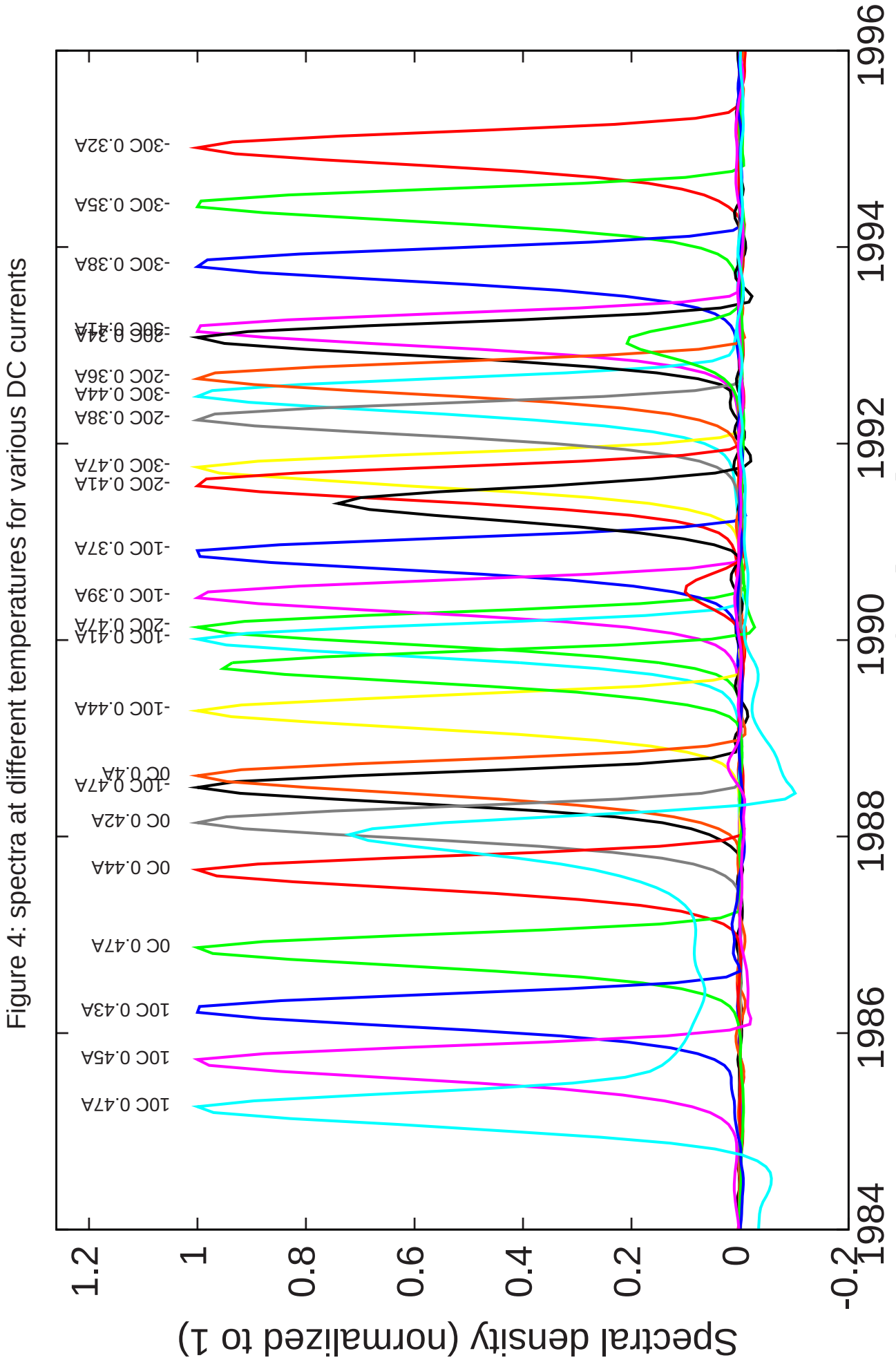

Figure 4: spectra at different temperatures for various DC currents

#sbcw6269 UP

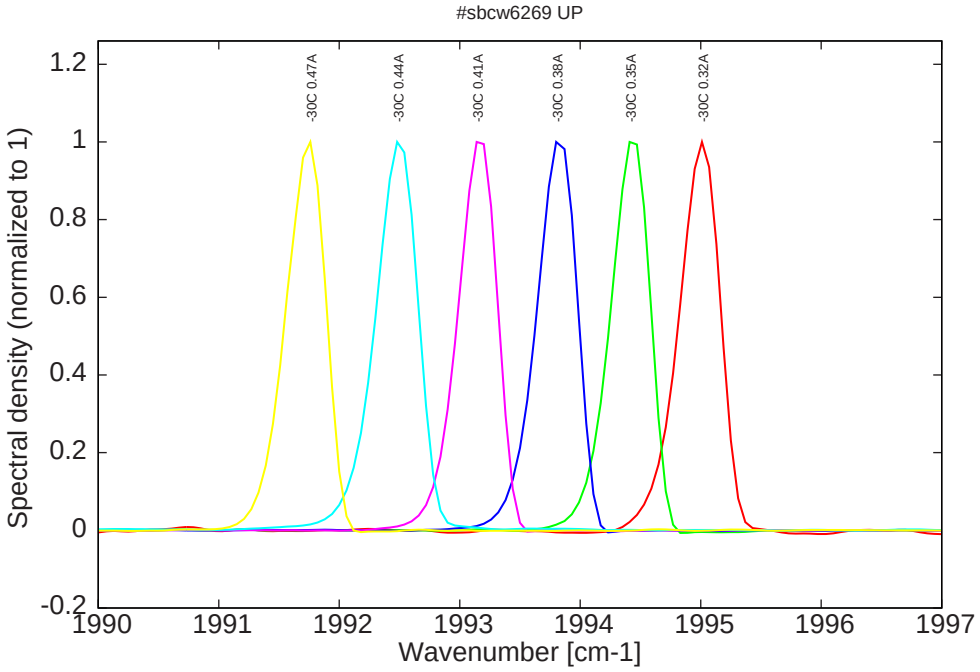

Figure 6: spectra at -30C for various DC currents (all monomode on mode 1 up to 0.47A, see Fig. 2 & 3)

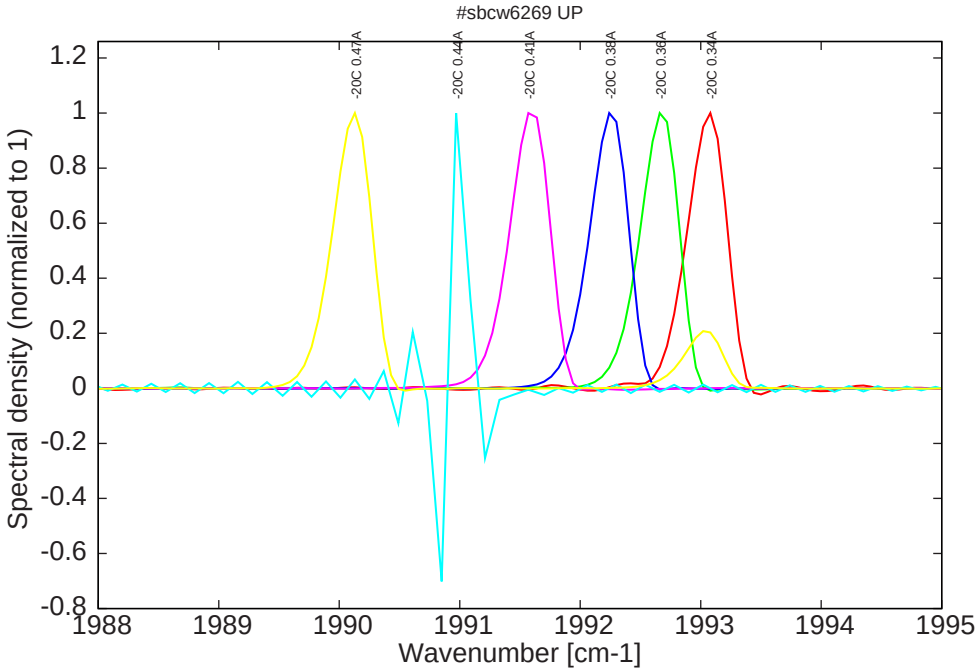

Figure 7: spectra at -20C for various DC currents (monomode on mode 1 up to 0.44A, then bimode, see Fig. 2 & 3)

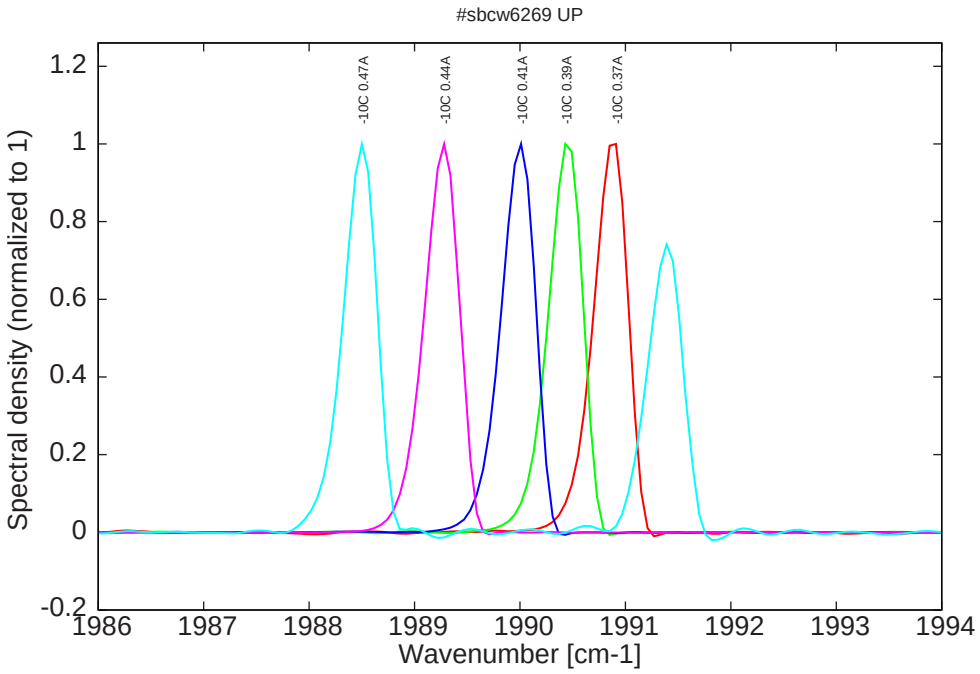

Figure 8: spectra at -10C for various DC currents (monomode on mode 1 up to 0.44A, then bimode, see Fig. 2 & 3)

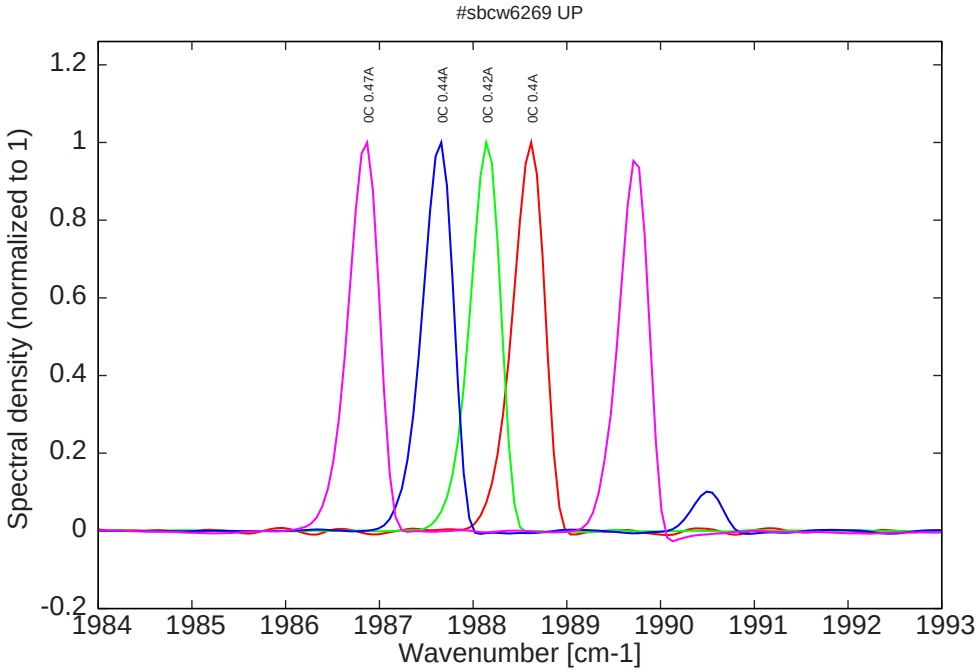

Figure 9: spectra at 0C for various DC currents (monomode on mode 1 up to 0.42A, then bimode, see Fig. 2 & 3)

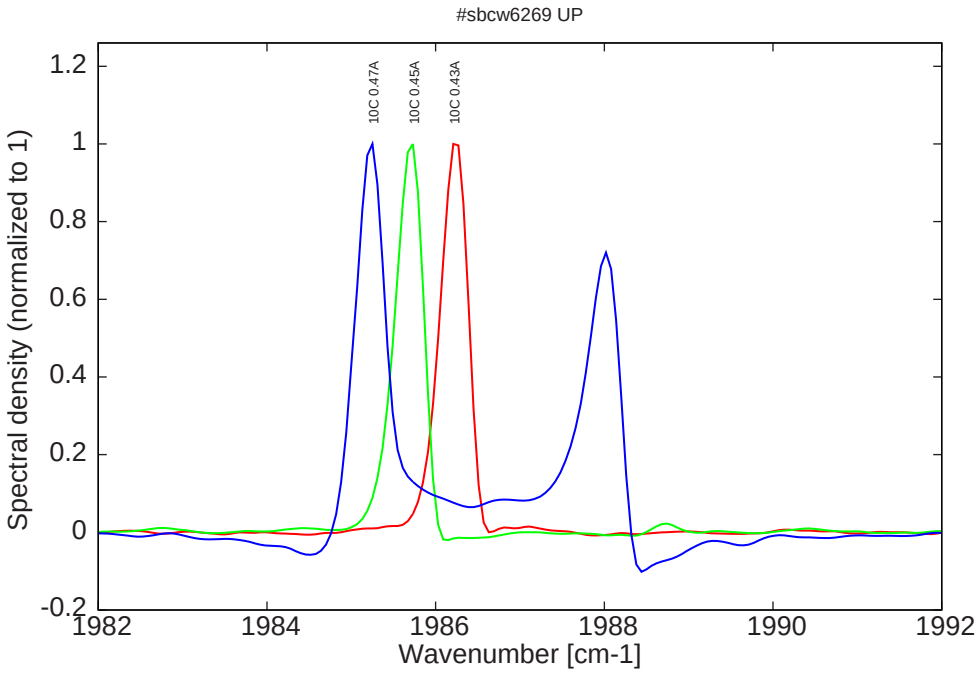

Figure 10: spectra at 10C for various DC currents (monomode on mode 1 up to 0.45A, then bimode, see Fig. 2 & 3)